

### **Abstract**

The present invention relates to a method for the secure  
5 access of mobile terminal to the Wireless Local Area Network  
(WLAN) and for secure data communication via wireless link,  
which, combining the common key encryption technology and the  
symmetry encryption technology, has resolved the failure in  
WLAN to provide effective control on secure MT access, and  
10 overcome the limitation on the confidentiality of the data  
communication via wireless link. When MT logs on AP, both  
parts must perform the certificate authentication through AS.  
Only the MT holding the legitimate certificate can access to AP  
holding the legitimate certificate; MT and AP perform the  
15 negotiation of common key for conversation, complete the  
dynamic revision of the secret key in each authentication, each  
secret key and in the process of conversation to achieve  
confidential data communication. Anyway, the method has not  
only achieved control on the access of MT, but also ensured the  
20 security of MT access and high confidentiality of communication.

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织  
国际局



(43) 国际公布日:

2004年5月21日(21.05.2004)

PCT

(10) 国际公布号:

WO 2004/043006 A1

(51) 国际分类号<sup>7</sup>: H04L 12/28  
(21) 国际申请号: PCT/CN2003/000632  
(22) 国际申请日: 2003年8月5日(05.08.2003)  
(25) 申请语言: 中文  
(26) 公布语言: 中文  
(30) 优先权:  
02139508.X 2002年11月6日(06.11.2002) CN

(71) 申请人(对除美国以外的所有指定国): 西安西电捷通无线网络通信有限公司(CHINA IWNCOMM CO., LTD) [CN/CN]; 中国陕西省西安市高新二路12号协同大厦4F.C座, Shanxi 710075 (CN)。

(72) 发明人;及

(75) 发明人/申请人(仅对美国): 铁满霞(TIE, Manxia) [CN/CN]; 唐厚俭(TANG, Houjian) [CN/CN]; 张变玲(ZHANG, Bianling) [CN/CN]; 张宁(ZHANG, Ning) [CN/CN]; 叶续茂(YE, Xumao) [CN/CN]; 中国陕西省西安市高新二路12号协同大厦4F.C座, Shanxi 710075 (CN)。

(74) 代理人: 中国专利代理(香港)有限公司(CHINA PATENT AGENT (H.K.) LTD.); 中国香港湾仔港湾

道23号鹰君中心22字楼, Wanchai, Hong Kong Special Administrative Region (CN)。

(81) 指定国(国家): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(84) 指定国(地区): ARIPO专利(GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚专利(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲专利(AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI专利(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

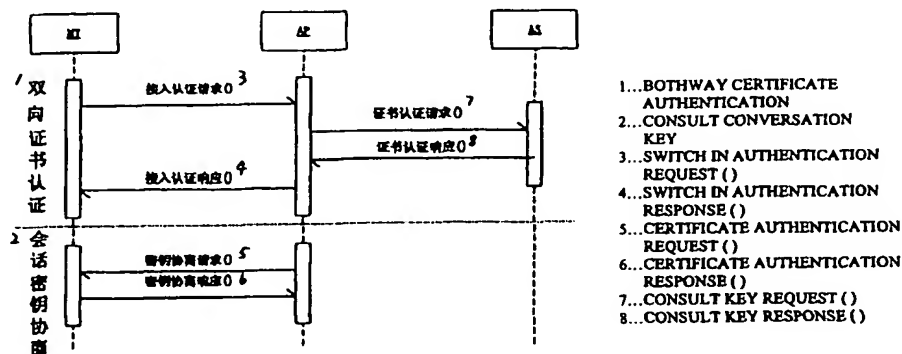
本国际公布:

— 包括国际检索报告。

所引用双字母代码和其它缩写符号, 请参考刊登在每期PCT公报期刊起始的“代码及缩写符号简要说明”。

(54) Title: A METHOD FOR THE ACCESS OF THE MOBILE TERMINAL TO THE WLAN AND FOR THE DATA COMMUNICATION VIA THE WIRELESS LINK SECURELY

(54) 发明名称: 无线局域网移动终端的安全接入与无线链路数据保密通信方法



(57) Abstract: A method for the access of the mobile terminal to the WLAN and for the data communication via the wireless link securely. Through the combination of the public key technology and the symmetrical key technology, the method can make secure access control for the mobile terminal to the WLAN and overcome the secret localization of the data communication via the wireless link. When the mobile terminal wants to enter the access point, both sides should authenticate the certificate each other. Only when both sides have the legitimate certificate, the mobile terminal can enter the access point. In order to realize the secure data communication, the mobile terminal and the access point consult the secret key for communication together, give a key for each authentication and amend the key in the conversation process. Anyhow, this method not only realizes the access control of the mobile terminal, but also ensures the security of the access control for the mobile terminal and the high privacy of the communication.

[见续页]

WO 2004/043006 A1